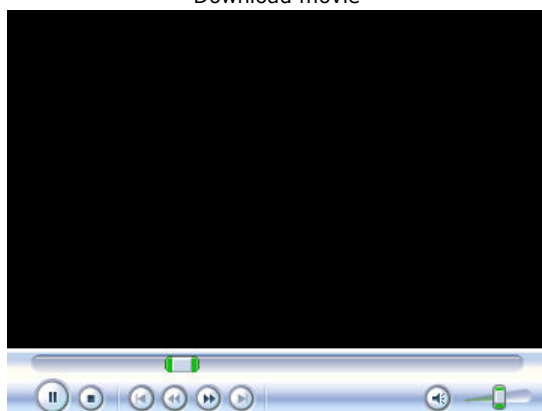


Effect of Ambient Gas Temperature

High-Speed Schlieren Movies of Diesel Sprays

Parameter	Low Gas Temperature	Moderate Gas Temperature	High Gas Temperature
Ambient O ₂ [%]	21	21	21
Ambient Temperature [K]	800	1000	1200
Ambient Density [kg/m ³]	28	28	28
ΔP_{inj} [MPa]	138	138	138
Orifice Diameter [mm]	0.260	0.260	0.260

Download movie



Fuel is #2 diesel fuel. Injector tip to wall is 109 mm.

The ignition delay (time from start of injection until start of combustion) decreases with increasing ambient temperature. After start of combustion, the spray penetration rate is approximately the same.

For further information, contact Web Grand Pooh-Bar
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